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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/885,776	06/19/2001	Edward W. Baldwin	R7560/206389	3690
23370	7590	11/01/2004	EXAMINER WYSZOMIERSKI, GEORGE P	
JOHN S. PRATT, ESQ KILPATRICK STOCKTON, LLP 1100 PEACHTREE STREET ATLANTA, GA 30309			ART UNIT 1742	PAPER NUMBER

DATE MAILED: 11/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/885,776

Applicant(s)

BALDWIN ET AL.

Examiner

George P Wyszomierski

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2003 and 16 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 2-25 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 is/are allowed.
- 6) ☒ Claim(s) 26 is/are rejected.
- 7) ☒ Claim(s) 27 and 28 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 20010910
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 1742

1. Applicant's election with traverse of Group III, claims 26-28 in the reply filed on September 29, 2003 is acknowledged. Applicant's election of the platinum species (with respect to linking claim 1) in the reply filed April 16, 2004 is also noted. The traversal is on the ground(s) that a search for the elected group would necessarily include a search for the non-elected groups. This is not found persuasive because nothing in the elected group would entail a search for alloys containing all of the elements recited in the Group I claims. Further, the process as defined in the elected claims is completely unrelated to the hydrogen production method and apparatus as defined in Group II.

The requirement is still deemed proper and is therefore made FINAL.

*Claim Interpretation*

2. The examiner notes that the instant claims involve materials "comprising" aluminum, sodium and lead. Applicant is advised that the term "comprising" leaves the claims open to the inclusion of additional, unmentioned elements, even in large quantities.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1742

4. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Foerster (U.S. patent 3,705,029), Kugler (U.S. Patent 4,511,398), Garat (U.S. patent 5,058,653), or Mori (U.S. Patent 4,732,820), any of which in view of general knowledge in the art as evidenced by, e.g. the ASM Handbook.

Each of Foerster, Kugler, Garat and Mori discloses heating materials comprising aluminum, sodium and lead to at least 600 degrees C to obtain a molten material, and allowing this material to cool to form an alloy (an alloy is, by definition, substantially homogeneous). See, for instance, the examples of Foerster, Example 1 of Kugler, column 4, line 8 and column 5, lines 39-42 of Garat, or column 4, lines 32-34 and Sample no. 7 of Mori.

The prior art does not specify the inert atmosphere required by the instant claim. The examiner's position is that it is well-known in the metallurgical arts that maintaining an inert atmosphere is desirable in most cases and critical in others, i.e. to prevent formation of oxides or to prevent porosity from forming in cast materials. The latter concept is set forth in the right hand column of page 38 of the ASM Handbook.

Because of the known advantages associated with the use of an inert atmosphere when making or treating hot metal, it would have been considered an obvious expedient by one of ordinary skill in the art to perform the processes of Foerster, Kugler, Garat, or Mori in an inert atmosphere.

*Allowable Subject Matter*

5. Claim 1 is allowable over the prior art of record, to the extent that it reads upon the elected species. The prior art does not disclose or suggest a substantially homogeneous catalytic alloy comprising aluminum, sodium, lead and platinum.

Art Unit: 1742


6. Claims 27 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not disclose or suggest forming a molten mixture comprising aluminum, sodium and lead in an manner as defined in claims 27 and 28.

7. The remainder of the art cited on the attached PTO-892 and 1449 forms is of interest. This art is held to be no more relevant to the claimed invention than the art as applied in the rejections, supra.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. Effective October 1, 2003, all patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



GEORGE WYSZOMIERSKI  
PRIMARY EXAMINER

GPW  
October 27, 2004